



EPI-SODE

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Multiple outbreaks of norovirus in long-term care facilities, Clark County, Washington, December 2002

On December 1 and 2, 2002, two long-term care facilities in Clark County, Washington (population 360,000) reported outbreaks of gastrointestinal illness to Clark County Health Department. Over the course of the following three weeks, eight similar outbreaks were reported from four other long-term care facilities, three health care centers, and the county jail. This report presents preliminary findings from investigations of outbreaks in four of the long-term care facilities experiencing the highest morbidity. Three of these facilities consisted of a mix of residents receiving different levels of care ranging from 24-hour skilled nursing service to support with activities of daily living to no professional assistance. The fourth facility, a boarding home with limited nursing service, provided care exclusively for persons with Alzheimer's disease.

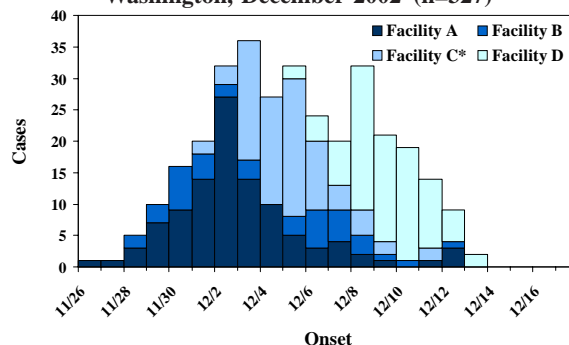
A case was defined as acute onset of gastrointestinal illness, including vomiting or diarrhea, with onset of symptoms after November 26, 2002 in a person working or residing in one of the outbreak settings. We identified a total of 354 cases of which 327 (92%) were associated with four long-term care facilities. In these four facilities, 220 (49%) of 452 residents and 107 (33%) of 326 staff reported illness. Eighty-four percent of persons had diarrhea; 78%, nausea; 77%, vomiting; 28%, muscle aches; and 26%, headache. The mean duration of illness was 49 hours. Eight cases were hospitalized, including one person with vomiting who subsequently died of pneumonia. The median age of cases was 80 years, range 16 to 105 years. The Alzheimer's facility experienced the highest attack rates with a rate of 85% for residents and 41% among the staff compared to an average attack rate in the other three facilities of 42% for residents and 30% among the staff. Seven stool specimens from cases in the four facilities were negative for bacterial pathogens. However, stool samples from six patients at three of the facilities were positive for noroviruses by reverse transcriptase-polymerase chain reaction performed at Washing-

ton Public Health Laboratories. Inspections of food preparation and handling practices at all four facilities found no evidence for foodborne etiology. In addition, no foodhandlers reported experiencing gastrointestinal symptoms just prior to the outbreaks.

Control measures included: keeping ill residents in their rooms; excluding ill staff from work; emphasizing hand hygiene for staff in accordance with recent CDC recommendations (1); and meticulous cleaning of all environmental surfaces, e.g. toilets, bath rails, and door knobs, with a 10% solution of household bleach or other virucidal agent (2). We instituted a "no gloves in the hallway policy" in order to assure glove changing between resident rooms. In addition, signs were posted in some of the facilities cautioning visitors who were elderly, very young, or had underlying medical conditions to postpone their visits while the outbreak was in progress. The average duration of the outbreaks in the four facilities was 12 days, range 9 to 16 days.

Although the origin of the outbreaks has not been identified, the distribution of onset dates in the cases over a period of days in separate facilities suggests person-to-person transmission within each facility, Figure 1. Hospital emergency department and major medical offices reported seeing an increased number of patients with gastro-intestinal illness during this period.

Figure 1. Number of cases of norovirus in four long-term care facilities by onset date - Clark County, Washington, December 2002" (n=327)



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Laboratories in providing assistance with this
investigation.

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SUMMARY OF SELECTED NOTIFIABLE CONDITIONS CLARK AND SKAMANIA COUNTIES, 2002 AND 2001				
CONDITIONS	CLARK COUNTY		SKAMANIA COUNTY	
	2002	2001	2002	2001
HIV	34	10	0	0
ENTERIC DISEASES				
Campylobacteriosis	52	58	0	*
<i>E. coli</i> O157:H7	13	9	0	0
Giardiasis	32	41	*	*
Salmonellosis	34	29	*	*
Shigellosis	8	8	0	0
HEPATITIS				
Hepatitis A	14	10	0	0
Hepatitis B, acute	6	10	*	0
Hepatitis B, chronic	89	104	*	0
Hepatitis C (chronic)	109	77	6	*
MENINGITIS AND INVASIVE DISEASE				
<i>Hemophilus influenzae</i>	*	*	0	0
Meningococcal disease	12	14	0	0
<i>Streptococcus</i> Group A	6	13	0	0
SEXUALLY TRANSMITTED DISEASES				
<i>Chlamydia trachomatis</i>	844	714	11	6
Gonorrhea	138	100	*	0
Syphilis (primary & secondary)	*	0	0	0
TUBERCULOSIS				
TB active disease	11	7	0	0
Latent TB infection +	179	317	0	0
VACCINE PREVENTABLE DISEASES				
Measles	*	*	0	0
Mumps	*	0	0	0
Pertussis	22	*	*	0
Rubella (including congenital)	0	0	0	0
OTHER				
Botulism	*	0	0	0
Lyme disease	*	*	0	0
Malaria	*	*	0	0
Tularemia	*	0	0	0

* <5 cases

+Patients followed by the health department

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